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The opinion in support of the decision being entered today is not binding precedent of the Board.

Paper 105

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Filed
May 28, 2002

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

YULUN WANG, DARRIN R. UECKER, CHARLES S. JORDAN,
JAMES W. WRIGHT, KEITH PHILLIP LABY, and JEFF D. WILSON

Junior Party,
(Patent 5,855,583),

v.

PHILIP S. GREEN

Senior Party
(Application 08/709,930).

Patent Interference No. 104,645

Before SCHAFER, LEE, and MEDLEY, Administrative Patent Judges.

MEDLEY, Administrative Patent Judge.

DECISION ON GREEN PRELIMINARY MOTIONS 2, 4 AND 5 AND JUDGMENT

A. Introduction

A decision on preliminary motions was entered on 30 March 2002 (Paper 97). Green preliminary motions 2, 4 and 5 were deferred. An issue to be decided in each of Green preliminary motions 2, 4, and 5 is whether certain prior art references are prior art to Wang. Wang was authorized to file evidence under 37

CFR § 1.131 in order to antedate the prior art references (Paper 97 at 52). On 2 May 2002, Wang filed a revised opposition, along with evidence, to Green's preliminary motions 2, 3 and 5, alleging acts of prior invention under 37 CFR § 1.131 (Paper 100). On 9 May 2002, Green filed a revised reply (Paper 104).

B. Decision

At the outset, we note that Wang was authorized to revise its opposition to Green's preliminary motion 4 regarding Jensen U.S. patent 5,807,378 as prior art to Wang. Wang chose not to do so. In Wang's original opposition to Green preliminary motion 4, Wang made no arguments regarding Jensen '378 other than that Jensen '378 is not prior art with respect to Wang (Paper 52 at 20, 23 and 24). Accordingly, that portion of Green's preliminary motion 4 regarding the unpatentability of Wang's claims 1-6, 8-11 and 13-15 in view of Jensen U.S. patent 5,807,378 is granted. Wang's claims 1-6, 8-11 and 13-15, are unpatentable under 35 U.S.C. § 102(e) as being anticipated by Jensen U.S. patent 5,807,378.

Wang did file a revised opposition to Green's preliminary motions 2, 3, and 5. However, our Order (Paper 97 at 52-53) authorized Wang to file a revised opposition to Green's preliminary motions 2, 4 and 5 (emphasis added). In our decision on preliminary motions, Green preliminary motion 3 was dismissed (Paper 97 at 12).

Accordingly, the only issues before us is whether Green's preliminary motion 2 to add Wang claims 7 and 12 to the interference should be granted, and if so, whether those same claims are unpatentable under 35 U.S.C. § 102(e) as being anticipated by Jensen U.S. patent 5,649,956 (Green preliminary motion 5).

In its preliminary motion 2, Green argues that Wang claims 7 and 12 should correspond to the count, since U.S. patent 5,807,378 (Jensen '378) teaches the features of Wang claims 7 and 12. In its preliminary motion 5, contingent upon the addition of Wang claims 7 and 12, Green argues that Wang's claims 7 and 12 are unpatentable under 35 U.S.C. § 102(e) as being anticipated by Jensen U.S. patent 5,649,956 (Jensen '956). Jensen '378 and Jensen '956 both have an effective filing date of 7 June 1995.

In its revised opposition, Wang seeks to antedate, under 37 CFR § 1.131, the Jensen '956 and '378 references as those references apply to its claims 7 and 12. As such, Wang must demonstrate that it reduced to practice the subject matter of its claims 7 and 12 prior to 7 June 1995, or that it conceived prior to 7 June 1995 coupled with due diligence from prior to 7 June 1995 to a subsequent reduction to practice. 37 CFR § 1.131(b). Wang seeks to establish a prior date of conception coupled with due diligence from prior to 7 June 1995 to its effective filing date (Paper 100 at 9).

Wang claims 7 and 12

Wang claim 7 depends on Wang claim 6, which depends on Wang claim 4, which depends on Wang claim 1. Those claims are reproduced below:

> 1. A medical robotic system, comprising:
>
> a robotic arm;
>
> a coupler that pivotally attaches to the arm;
> an endoscopic surgical instrument that is held by said coupler; and
>
> a controller having a handle, the controller in electrical communication with the robotic arm; and
>
> wherein movement at the controller produces a proportional movement of the robotic arm and surgical instrument.
>
> 4. The system of claim 1 wherein the articulable surgical instrument comprises a base, a pivot linkage, and a distal end.
>
> 6. The system of claim 4 wherein a movement at the controller results in corresponding movement of the distal end of the articulable surgical instrument relative to the base of the articulable surgical instrument.
>
> 7. The system of claim 6 wherein the tool attached at the distal end of the articulable surgical instrument is a stapler.

Wang claim 12 depends on claim 9. Wang claim 9 and 12 are reproduced below:

> 9. A method for operating a surgical robotic system for performing a surgical procedure on a patient, the method comprising:
>
> 1) providing a first articulate arm, a controller and an input device which receives input commands, the first articulate arm in electrical communication with the

controller and the controller in electrical communication with the input device;

2) cutting at least one incision into the patient;

3) attaching a surgical instrument to the first articulate arm;

4) inserting said surgical instrument into the patient through the at least one incision;

5) generating input commands to move said surgical instrument in accordance with the procedure being performed wherein said robotic arm moves said surgical instrument in accordance with the input commands; and

6) removing the surgical instrument from the patient.

12. The method of claim 9 wherein the surgical instrument is a stapler.

As seen from the above, both Wang claims 7 and 12 require that the surgical instrument is a stapler. Wang's proofs are directed to showing prior conception of Wang claims 7 and 12, including the limitations of the claims from which they depend.

Wang's alleged conception

Wang alleges that Yulun Wang (Dr. Wang) conceived the idea of using a stapler as an instrument for a robotic surgical system by at least February of 1995 (Paper 100 at 10), directing us to paragraphs 17-21 of Dr. Wang's declaration. Those paragraphs are reproduced below:

17. I routinely recorded technical concepts, business plans and phone conversation in a notebook. I kept such a notebook for the year 1995. I have attached a true and correct copy of a notebook entry from my 1995 notebook as Wang Exhibit 2035. The entry "1/12 talked to Jeff White" is a note relating to a phone conversation I had with Mr. White

who was employed at US Surgical. US Surgical sold staplers for use in medical procedures.

18. I have attached a true and correct copy of another entry from my 1995 notebook as Wang Exhibit 2036. The entry "Earlier mtg with Leon Hirsch" is a note relating to a phone conversation I had with Mr. Hirsch who was chairman and chief executive officer of US Surgical.

19. Upon reviewing this notebook entry I recall discussing with Mr. Hirsch whether US Surgical would be interested in a partnership to develop a system where a stapler was attached to the system disclosed in the ATP proposal.

20. CMI continued to discuss a partnership with US Surgical through 1997 as described in letters to Joe Devivo and Jeff White dated May 23, 1997 and December 18, 1997, respectively, true and correct copies are attached as Wang Exhibits 2037 and 2038.

21. The letter to Mr. Devivo describes a partnership to integrate the ZEUS with a One-Shot product provided by US Surgical. ZEUS is a CMI product that includes a robotic arm, a coupler pivotally attached to the arm, an endoscopic instrument held by the coupler, and a controller. The controller has a handle and is in electrical communication with the robot arm so that movement of the controller produces a proportional movement of the arm. The One-Shot product sold by US Surgical was a stapler instrument.

The events that occurred as described in paragraphs 20 and 21 of Dr. Wang's declaration are after the "critical date" of 7 June 1995. Therefore, those events do not demonstrate a prior conception.

In paragraph 17 of its declaration, Dr. Wang discusses an entry made in his notebook (Wang Ex. 2035) regarding a phone conversation he had with Mr. White of US Surgical on 12 January 1995, and states that US Surgical sold staplers for use in medical procedures. Dr. Wang's statement that US Surgical sold

staplers is insufficient to establish prior conception of Wang claims 7 and 12. That US Surgical sold staplers, does not mean that Wang conceived of using a stapler as a surgical instrument on the end of a robotic arm as claimed.

Wang exhibit 2035 is a copy of a notebook with handwritten notes. For the entry of "1/12", there is a reference that Wang "talked to Jeff White", however the entry does not describe a robotic system where the surgical instrument is a stapler. Even absent from the entry is the word stapler.

In paragraphs 18 and 19 of Dr. Wang's declaration, Dr. Wang directs us to another entry from his 1995 notebook (Wang Ex. 2036), annotating an "Earlier mtg with Leon Hirsch" which, according to Dr. Wang was actually a phone conversation with Mr. Hirsch. Absent too in this entry is any reference to a stapler, or a description of a robotic system where the surgical instrument is a stapler.

In paragraph 19, Dr. Wang states that he recalls discussing with Mr. Hirsch (during the phone conversation) whether US Surgical would be interested in a partnership to develop a system where a stapler was attached to the system disclosed in the ATP proposal[1]. Dr. Wang does not state when the phone conversation

[1] Wang relies on the ATP proposal to demonstrate a prior conception of a robotic system for those claims upon which Wang claims 7 and 12 depend.

with Mr. Hersch occurred. Dr. Wang only states that the entry is from his 1995 notebook.

The notebook entry that Dr. Wang directs us to fails to establish a credible date. The date at the top of the page is "/29". This is an incomplete date and could be any time, e.g. any month in 1995. At the bottom of the notebook page is the handwritten entry of "3/95". That handwritten date, however is suspect. First, the handwritten "3/95" date is in a different handwriting than every other entry on the notebook page. Furthermore, all other notebook pages submitted into evidence (e.g. Wang Ex. 2035) do not have a date on the bottom of the page. Wang presents no explanation. For these reasons, we do not credit the entry "3/95" on the bottom of the notebook page.

Accordingly, Wang has failed to establish a date of conception prior to 7 June 1995. Since Wang has failed to sufficiently rebut Green's prima facie case as set forth in Green preliminary motion 2, Green's revised reply need not and has not been considered. For these reasons, Green preliminary motion 2 to designate Wang claims 7 and 12 as corresponding to the count is granted. Wang claims 7 and 12 are now designated as corresponding to Count 2[2].

[2] Count 2 was substituted for Count 1 (Paper 98).

For the same reasons given above, as applied to Green preliminary motion 5 for judgment against Wang on the ground that Wang claims 7 and 12 are unpatentable under 35 U.S.C. § 102(e) as being anticipated by Jensen U.S. patent 5,649,956 (Jensen '956), Jensen '956 is prior art to Wang.

In its preliminary motion 5, Green directs us to where in the Jensen '956 patent, the claimed elements are described. In addition and in compliance with paragraph 26(d) of the Standing Order, Green includes an (1) Appendix A of Wang claims 1, 4, 6, and 7 with citations to Jensen '956 for every claimed element and (2) Appendix B of Wang claims 9 and 12 with citations to Jensen '956 for every claimed element (Paper 28).

The Jensen '956 patent incorporates the disclosure of Green's parent application 07/823,932 ('932), which is identical to Green's involved application.

In its opposition, Wang argues that the '932 specification does not provide an enabling disclosure for a controller having a handle and being in electrical communication with the robotic arm as recited in Wang claim 1 and Wang claim 9. Wang argues that the '932 disclosure does not provide the structure or mechanisms including the motors that operate the device, and that these essential items are described as not being shown in the '932 disclosure (Paper 54 at 4 and 9).

Wang directs us to no supporting evidence that demonstrates experimentation would be necessary to practice the '932

disclosure, let alone that such experimentation would be undue. That the motors for operating the arm and controller are not shown, does not by itself demonstrate that one skilled in the art would not be able to practice the claimed invention.

Wang further argues that the '932 disclosure fails to disclose that the "movement at the controller produces a proportional movement of the robotic arm and surgical instrument" of Wang claim 1. Wang argues that the limitation requires scaling the movement at the controller so that the robotic arm and surgical instrument have a movement that is different (Paper 54 at 5). Wang claim 1 does not require scaling the movement. In any event, Wang has failed to sufficiently demonstrate that the Green '932 disclosure does not describe a "scaling" feature.

Wang argues that the '932 disclosure describes changing the work site dimensions, but does not describe scaling the movement at the controller so that the robotic arm and surgical instrument have a movement that is different. Wang directs us to the portion of Green's '932 disclosure that state:

> Any scale factor may be employed, the invention not being limited to full-scale manipulation. For example, the worksite can be small, including microscopic in size, in which case the optical parameters, including distance to object, interocular distance and focal length, and mechanical and dimensional parameters are appropriately scaled.
>
> By using appropriate scaling and image magnification and force and torque feedback, and by locating the image 30V of the workspace 30 adjacent hand-operated control means 76R and 76L, the operator is provided with a strong sense of

directly controlling the end effectors 40R and 40L. (Green Ex. 1080 at 11, lines 14-26).

Wang has failed to sufficiently demonstrate that one of ordinary skill in the art would not understand the above to mean that embodiments are described wherein the movements made at the controller would necessarily be different from the movements of the arm and thus the surgical instrument. In the small worksite embodiment, movement made at the worksite would necessarily be a smaller movement than that made by the operator at the controller. Indeed, Green's '932 disclosure further describes:

> Servomechanism scaling of axial movement of the telescopic control arms is provided such that axial extension or retraction thereof results in a smaller extension or retraction of the telescopic insertion sections (Green Ex. 1080, page 16, lines 2-6).

The above descriptions support, for example, a movement of the arm and surgical instrument proportional to that of the controller. That is, '932 describes scaling of axial movement of the insertion arm (and thus the instrument) such that it is different than the movement of the controller.

Wang fails to sufficiently demonstrate otherwise. Wang has failed to direct us to supporting evidence in the way of a declaration or affidavit from one having ordinary skill in the art that demonstrates that '932 fails to convey to that person that the disclosure describes the features recited in Wang claim 1. Wang relies solely on attorney argument.

Wang additionally argues that the '932 disclosure does not provide an enabling disclosure for pivoting the distal end of a surgical instrument as recited in Wang claim 4, since the motors and linkages necessary for pivotal movement are not disclosed (Paper 54 at 8).

Wang claim 4 does not recite pivoting the distal end of a surgical instrument. Wang claim 4 recites that the surgical instrument comprises a base, a pivot linkage, and a distal end. Once again, Wang is impermissibly reading limitations into its claim. Wang claim 4 is not ambiguous. The terms need no clarification. Wang provides no explanation as to why its claim 4 should be interpreted such as to add limitations into its claims.

Since Wang has failed to sufficiently demonstrate that Wang claim 4 requires pivoting the distal end of a surgical instrument, Wang's enablement argument is not persuasive.

In any event, Wang has failed to sufficiently demonstrate that one of ordinary skill in the art would be faced with undue experimentation to operate the instrument about the pivot point of the incision.

Wang's assertions that the '932 disclosure lacks mechanisms and structures for pivotal movement are conclusory. Wang fails to direct us to evidence that would support Wang's arguments that the '932 disclosure fails to provide the mechanisms that one of ordinary skill would need to practice the claimed invention.

Wang relies on attorney argument alone to conclude that the '932 disclosure is not enabled. Note that argument of counsel cannot take the place of evidence lacking in the record. Estee Lauder Inc. v. L'Oreal, S.A., 129 F.3d 588, 595, 44 USPQ2d 1610, 1615 (Fed. Cir. 1997).

Wang argues that the Jensen '956 patent does not disclose a method for operating a surgical robotic system for performing a surgical procedure as recited in the preamble of Wang claim 9 (Paper 54 at 9). Wang provides no further explanation. Wang has failed to sufficiently rebut Green's argument that Jensen '956 does describe a robotic surgical system for performing a surgical procedure on a patient. As pointed out by Green, the '956 disclosure states that the "invention relates to surgical manipulators and more particularly to robotically-assisted apparatus for use in surgery." (Green Ex. 1079, col. 1, lines 4-5). The disclosure further states that the system "is part of an electromechanical device that can be coupled to a controller mechanism to form a telerobotic system for operating the surgical instrument by remote control." (Green Ex. 1079, col. 1, lines 64-67). Wang fails to discuss in any meaningful way why the passages that Green directs Wang to are inaccurate or do not meet the preamble of Wang claim 9. Accordingly, Wang's argument is not persuasive.

For the reasons stated above, Green preliminary motion 5 is granted. Wang claims 7 and 12 are unpatentable under 35 U.S.C.

§ 102(e) as being anticipated by Jensen '956.

Our decision on preliminary motions (Paper 97) is now final as modified by our decision herein.

Wang, in its preliminary statement, has failed to allege a date prior to Green's 21 January 1992 effective filing date. The earliest date alleged by Wang, its date of conception, is 21 April 1992. Thus, it is appropriate to enter judgment against the junior party Wang. See 37 CFR § 1.640(d)(3).

Accordingly, it is

ORDERED that judgment as to Count 2 (Paper 98 at 2), the sole count in the interference, is awarded against junior party YULUN WANG, DARRIN R. UECKER, CHARLES S. JORDAN, JAMES W. WRIGHT, KEITH PHILLIP LABY, and JEFF D. WILSON;

FURTHER ORDERED that junior party YULUN WANG, DARRIN R. UECKER, CHARLES S. JORDAN, JAMES W. WRIGHT, KEITH PHILLIP LABY, and JEFF D. WILSON is not entitled to a patent containing claims 1-15 (corresponding to Count 2) of U.S. Patent 5,855,583;

FURTHER ORDERED that a copy of this paper shall be made of record in the files of application 08/709,930, and U.S. Patent 5,855,583;

FURTHER ORDERED that if there is a settlement agreement, attention is directed to 35 U.S.C. § 135(c) and 37 CFR § 1.661.

RICHARD E. SCHAFER)
Administrative Patent Judge)
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Administrative Patent Judge) BOARD OF PATENT APPEALS AND INTERFERENCES
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cc (via federal express)

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